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646 Combined autologous cellular cardiomyoplasty with skeletal myoblasts and bone marrow cells in canine hearts for ischemic cardiomyopathy

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By use of autologous myoblasts and bone marrow mononuclear cell transplantation, myogenesis and angiogenesis were achieved in infarcted myocardium, suggesting a therapy for improvement in cardiac performance.

654 Hemodilution and surgical hemostasis contribute significantly to transfusion requirements in patients undergoing coronary artery bypass

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We sought to determine the risk factors for the development of low intraoperative hematocrit levels and of excessive postoperative bleeding in patients undergoing CABG, whether the risk factors are the same, and their effect on blood product transfusions.

662 Aprotinin improves kidney function and decreases tubular cell apoptosis and proapoptotic signaling after renal ischemia-reperfusion

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The effects of aprotinin were studied in a rat model of renal ischemia-reperfusion. Aprotinin provided protection from renal ischemia-reperfusion injury and may do so by affecting apoptotic signaling and inflammatory cytokine production.

670 Pharmacologic cerebral capillary blood flow improvement after deep hypothermic circulatory arrest: An intravital fluorescence microscopy study in pigs

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The platelet glycoprotein IIb/IIIa inhibitor eptifibatide can safely be used in the setting of DHCA–reperfusion when performing cardiac surgery. It improves prevailing cerebral capillary blood flow and reduces cerebral edema significantly.

677 Mechanical deterioration underlies malignant behavior of aneurysmal human ascending aorta

George Koullias, MD, Raj Modak, MD, Maryann Tranquilli, RN, Dimitris P. Korkolis, MD, Paul Barash, MD, and John A. Eleftheriades, MD, New Haven, Conn

Mechanical properties of the aneurysmal ascending aorta were measured in patients before aortic replacement and compared with those of nondilated aortas. Mechanical properties were found to deteriorate dramatically as the aorta approached 6 cm diameter. This mechanical deterioration probably underlies the malignant clinical behavior of the aorta at these dimensions.

684 A femoral artery cannula that allows distal blood flow

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A distal-flow cannula was developed and tested in a porcine model. Ultrasonic flow probe and microsphere data demonstrated more distal flow and perfusion with this cannula than with a standard cannula of the same size.

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